Date of RFP 4/5/2013	New Jersey Department of Transportation Bureau of Research **RESEARCH PROJECT** **Request for Proposals** **2013 Program**	Closing Date 5/14/2013

Route 139 Rehabilitation: Pulaski Skyway Contract 2

Project No. 2013-11

(Proposals must be prepared in accordance with NJDOT's *Information and Instructions for Preparing Proposals.* Please visit:
http://www.state.nj.us/transportation/refdata/research/pdf/techpropresproj.pdf
Revised Proposal Evaluation Forms are available for your information on the website.)

Proposals will be based on the merit of the information contained in the proposal. Budgets will be evaluated separately. Please place three (3) copies of the budget for this project in a separate sealed envelope.

1. RESEARCH PROBLEM STATEMENT, BACKGROUND AND OBJECTIVES

The Hoboken Viaduct (Rt 139) located in Jersey City Hudson County was constructed in 1932 with an open concrete balustrade along the length of the roadway. The viaduct is part of the Rt 1/1&9 Historic Corridor. The Pulaski Contract 2 (formerly Rt 139, Contract 3) project will replace the existing balustrade with a solid crash tested parapet.

The Historic Preservation Office (HPO) has approved the Pulaski Skyway Contract 2 project with the condition that an open faced concrete balustrade be designed to meet current crash standards (crash tested balustrade).
This requirement was implemented because NJDOT is removing many historic open balustrade design parapets throughout the state, and replacing them with solid parapet design. The open face balustrade design was a common bridge parapet type used throughout the country during the decades of the 1930's and 40's. There is no current crash tested open balustrade design available, so the development of a crash tested open balustrade design would enable NJDOT to replace historic parapets with similar modern designed options, and avoid, or mitigate, adverse effects to historic bridges. In addition, the design has the potential to be adopted by other states that face the same issue.

2. TASKS

[Provide a listing of appropriate general tasks divided into phases based on types of work (e.g., laboratory, field) or by year (e.g., year 1, year 2) or other appropriate milestones]

The NJDOT is seeking the insight of proposal responders on how best to achieve the research objectives. Proposers are expected to describe a research effort that can realistically be accomplished as expeditiously as possible. Proposals must present the proposers' current thinking in sufficient detail to demonstrate their understanding of the problem and the soundness of their approach for conducting the required research.

PHASE I – Literature Search

Conduct a literature search of the current state of the practice.

After the award of the project, a more comprehensive literature search should be conducted. At the completion of this literature search, the PI will make a presentation to the Research Project Selection and Implementation Panel to discuss their findings and to discuss the appropriate research approach.

PHASE II – Research Approach and Anticipated Results

Clear description of how you will solve the problem and implement anticipated findings. Work may be divided into phases (e.g., Laboratory, Field or Year 1, Year 2) as necessary to clarify tasks. *Exit Criteria* must be developed during this phase.

1) The design and testing of balustrade take place during the four year construction period for the project
2) NJDOT will develop plans, specifications, and other appropriate contract documents and will submit to HPO for approval
3) The HPO will have input, and review authority, of the design
4) The proposed parapet will be tested, and re-designed once, in case of failure. If after a second test the design still fails, the project will be terminated with a report to be submitted to NJDOT.
5) Design Criteria: The only existing crash-tested balustrade design utilizes opening that are small and have an opening to support column ratio of roughly 1:2. The historic balustrade design has taller openings and a ratio of opening to support column that is closer to 1:1. Any new design needs to incorporate a taller opening, and a ratio of opening to support column that is close to the historic ratio (1:1). We anticipate that the current crash tested design can be successfully modified to pass both, the design, and the crash tests criteria.

3. IMPLEMENTATION AND TRAINING PLAN

The PI must meet with the Research Project Selection and Implementation Panel (RPSIP) and other NJDOT units to present the findings and as appropriate train these personnel in the use the project results.

The PI will develop an implementation plan as per the guidelines provided by NJDOT Research Bureau.

4. DELIVERABLES:

[List of minimum deliverables necessary to complete the project]

- Presentation of Summary of Literature Search Results
- Discussion to Support and Refine the Project Tasks
- Project work plan.
- Technical Memorandum on the survey results
- Technical memorandum on the measures that are working or not working
- Technical memorandum on actions taken
- Interim Status reports suitable for Senior Leadership if required
- Quarterly Reports and Final report with appropriate tables, graphs and charts in hard copy version, PDF file format, Word, and on CD ROM. Two copies plus one per RSIP member of each presentation, technical memorandum, draft final report and Final Report (plus 10 copies).
- The Final Report and Tech Brief are due three (3) months before the end date of the project to allow time for review by the Research Project Selection and Implementation Panel. The Final Acceptance will be granted upon receipt of ten copies of the approved final report.

5. CONTRACT TIME:

The PI must provide the anticipated research study duration based on the proposed tasks. Consideration should be given to potential impediments so that adjustments are incorporated into the schedule minimizing the need for time extensions.

A 24 - 36 months time frame would be preferred.

6. CONTACTS:

Questions on this topic **shall not** be directed to any Research Project Manager, Research Customer, or any other NJDOT person. All questions are to be directed to Camille Crichton-Sumners by sending an e-mail to Camille.CrichtonSumners@dot.state.nj.us, or by phone (609-530-5966).

A meeting may be scheduled with interested parties after the RFP's are distributed to refine the objectives and deliverables and to promote a better understanding of the research needs. **This must be requested on or before April 19, 2013**.

7. DEADLINE

Proposals (10 single-bound copies) are due at the NJDOT Bureau of Research

no later than 5:00 p.m. on May 14, 2013

Authorization to Begin Work: August 16, 2013, approximate

8. PROPOSAL DELIVERY INSTRUCTIONS:

For private, paid messenger services such as Federal Express, DHL, UPS, etc., or for hand-carried deliveries:

2013 PROPOSAL-NJDOT
New Jersey Department of Transportation
Bureau of Research
1035 Parkway Avenue
Trenton, New Jersey 08625-0600

For U.S. Postal Service mail:

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